UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,495	09/27/2001	Michael Raftelis	WRN0013	3735

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EXAMINER
ROBERTS, BRIAN S

ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/965,495	RAFTELIS ET AL.
	Examiner	Art Unit	
	Brian Roberts	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>27 September 2001</u>.

2a) ☐ This action is FINAL.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-30</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-30</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>27 September 2001</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   Claims.1-30 have been examined.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Uematsu et al. (US 6785224) in view of La (US 5412652)

-   In reference to claim 1 and 16

Uematsu et al. teaches a ring configuration system and method where a plurality

of network elements are connected linearly and perform topology construction for the

ring by circulating topology data through each of the respective network elements and

collecting connection information through the network elements (abstract). A plurality of

network elements in a linear topology can be grouped into a BLSR topology with a

working path (first grouping) and a protection path. Topology data frames are

transmitted between the network elements to configure the BLSR and a topology table

in the network elements stores the network elements IDs and topology data.

Uematsu et al. does not explicitly teach that the network elements have a

processing module and memory, or that the topology table contains path identification

information for the working and protection path.

La teaches a SONET ring table that contains ring type and ring identification,

number of nodes, ring status, node identification, sequence, status, and SONET ring

path identification information. (abstract) The ring table stores can store path

identification information for both the working and protection path (Figures 9a-c). In

Figure 11, La teaches a network element with a CPU (120) (processing module) and

memory (121)

It would have been obvious to a person of ordinary skill in the art at the time of

the invention to modify the system and method of Uematsu et al. to include ring tables,

a CPU, and memory in the network elements as taught by Lu because the ring tables

would facilitate configuration or reconfiguration of the network elements into ring

topologies within the SONET environment.

- In reference to claim 2 and 17

In Figures 8 and 9, Uematsu et al. further teaches:

- An operator gives a topology construction command to configure a open-ring

  topology into a BLSR topology (column 8 lines 46-47)

- Figures 8 and 9 detail the steps to automatically configure a BLSR topology

  with a working (first and third grouping) and protection path (second grouping)

  via the nodes transmitting the topology data (column 9 lines 34-36)

- In reference to claim 3 and 18

In Figure 2, Uematsu et al. further teaches:

- Network elements in the working path (first grouping) assign resources via the topology table

- Network elements link to form a working path

- In reference to claim 4 and 19

In Figure 8, Uematsu et al. further teaches the nodes transmit their own node ID (column 8 lines 55-59)

- In reference to claim 5 and 20

- In Figure 8, Uematsu et al. further teaches that Node B receives a topology construction command (processing a communication link alteration request) and transmits topology data TD2 (link command) to node C to configure the open ring topology into a BLSR topology. (column 8 lines 38-59)

- In reference to claim 6, 7, 21, and 22

- In Figure 2, Uematsu et al. further teaches that a plurality of network elements in a linear topology can be grouped into a BLSR topology with a working path (first grouping) and a protection path (second grouping).

- In reference to claim 8, 11-12, 23, and 26-27

Uematsu et al. teaches a ring configuration system and method where a plurality of network elements are connected linearly and perform topology construction for the

ring by circulating topology data through each of the respective network elements and collecting connection information through the network elements (abstract). A plurality of network elements in a linear topology can be grouped into a BLSR topology with a working path (first grouping) and a protection path (second grouping). Topology data frames are transmitted between the network elements to configure the BLSR and a topology table in the network elements stores the network elements IDs and topology data.

Uematsu et al. does not explicitly teach that the network elements have a processing module and memory, or that the topology table contains path identification information for the working and protection path.

La teaches a SONET ring table that contains ring type and ring identification, number of nodes, ring status, node identification, sequence, status, and SONET ring path identification information. (abstract) The ring table stores can store path identification information for both the working and protection path (Figures 9a-c). In Figure 11, La teaches a network element with a CPU (120) (processing module) and memory (121).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of Uematsu et al. to include ring tables, a CPU, and memory in the network elements as taught by Lu because the ring tables would facilitate configuration or reconfiguration of the network elements into ring topologies within the SONET environment.

- In reference to claim 9 and 24

In Figure 8, Uematsu et al. further teaches that the nodes transmit their own
node ID (column 8 lines 55-59)

- In reference to claim 10 and 25

- In Figure 8, Node B receives a topology construction command (processing a
  communication link alteration request) and transmits topology data TD2 (link
  command) to node C to configure the open ring topology into a BLSR
  topology.

- In reference to claim 13,15, 28 and 30

In Figures 8 and 9, Uematsu et al. further teaches:

- An operator gives a topology construction command to configure a open-ring
  topology into a BLSR topology (column 8 lines 46-47)

- Figures 8 and 9 detail the steps to automatically configure a BLSR topology
  with a working (first grouping) and protection path (second grouping) via the
  nodes transmitting the topology data

Uematsu et al. does not explicitly teach that the network elements having a
processing module and memory or that the topology table contains path identification
information for the working and protection path.

La teaches a SONET ring table that contains ring type and ring identification,
number of nodes, ring status, node identification, sequence, status, and SONET ring

path identification information. (abstract) The ring table stores can store path

identification information for both the working and protection path (Figures 9a-c). In

Figure 11, La teaches a network element with a CPU (120) (processing module) and

memory (121)

It would have been obvious to a person of ordinary skill in the art at the time

of the invention to modify the system and method of Uematsu et al. to include ring

tables, a CPU, and memory in the network elements as taught by Lu because the ring

tables would facilitate configuration or reconfiguration of the network elements into ring

topologies within the SONET environment.

-   In reference to claim 14 and 29

In Figure 8 and 9, Uematsu et al. further teaches the network elements

automatically perform topology configuration.

Uematsu et al. does not explicitly teach a network element processing a

communication link modification or deletion command.

La teaches reconfiguring a ring topology by adding and deleting network

elements in the ring topology that inherently involves a network element processing a

link modification and deletion command.

It would have been obvious to a person of ordinary skill in the art at the time of

the invention to modify the system and method of Uematsu et al. to include adding or

deleting a network element in a ring topology as taught by Lu that inherently includes

processing a communication link modification and deletion command because

processing a communication link modification and deletion command allows network

element in a ring topology to be automatically added or delete and thus allows

configuration or reconfiguration of the ring topology.

Conclusion

4.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure are:

- Nakazumi (US 5826038) teaches a method of detecting the network

  configuration of a communication network in which a plurality of nodes are

  connected in a ring form.

- Usuba et al. (US 6614754) teaches a bi-directional line switched ring network

  system.

- Saleh et al. (US 2003/0058804) teaches a method of discovering a physical

  path between nodes and establishing a virtual path.

- Kremer (US 5442620) teaches an apparatus and method for preventing

  communications circuit misconnections in a bidirectional line-switched ring

  transmission system.

5.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Brian Roberts whose telephone number is (571) 272-

3095. The examiner can normally be reached on M-F 8:30-5:30.

·If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

BSR
09/12/2005

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